

Listing of Claims.

1. (Currently Amended) A method for identifying an unknown print medium, the method comprising:  
transporting a print medium from a print media supply along a paper path and over an apparatus structure positioned in the paper path, a hard copy apparatus structure including a reflective element and a non-reflective element;  
beaming transmissive light through the print medium;  
impinging the transmissive light onto the reflective element;  
impinging the transmissive light onto the non-reflective element;  
sensing a reflected light from the reflective element and the non-reflective element;  
recording data representative of medium thickness and transmissivity using an incident light source light reflection and light absorption; and  
comparing recorded data from said recording to predetermined data representative of known print medium thickness and transmissivity a known print medium thickness and a known print medium transmissivity.
2. (Currently Amended) The method as set forth in claim 1 wherein said the step of recording data representative of light reflection and light absorption further comprises:  
recording transmissive light levels of the print medium over a lightwave reflective element, and  
recording transmissive light levels of the print medium over a lightwave absorptive element.
3. (Original) The method as set forth in claim 1 further comprising: when no match between said recorded data and said predetermined data is obtained, storing said recorded data as a new print medium data file.
4. (Original) The method as set forth in claim 1 embodied in computer code.

5. (Currently Amended) A method for characterizing print media comprising:

transporting a print medium from a print media supply along a paper path and over an apparatus structure positioned in the paper path, the apparatus structure including a reflective element and a non-reflective element;

beaming transmissive light through a first type of print medium;

impinging the light onto a surface reflective of the light and a surface absorptive of the light;

recording a profile representative of light reflection and light absorption; and

storing said profile in a memory with an identifier associated with said first type of print medium.

6. (Currently Amended) The method as set forth in claim 5 further comprising:

beaming (~~radiating~~) transmissive light through a second type of print medium;

impinging the light onto a surface reflective of the transmissive light and a surface absorptive of the transmissive light;

recording a profile representative of light reflection and light absorption; and

storing said profile in a memory with an identifier associated with said second type of print medium.

7. (Currently Amended) The method as set forth in claim 6 wherein said memory is used as a look-up table for identifying a print medium.

8. (Currently Amended) A method for determining a multi-pick feed of cut sheet print media, the method comprising:

transporting a print medium from a print media supply along a paper path and over an apparatus structure positioned in the paper path, the hard copy

apparatus structure including a reflective element and a non-reflective element;  
beaming transmissive light through the print medium;  
impinging the transmissive light onto the reflective element;  
impinging the transmissive light onto the non-reflective element;  
sensing a reflected light from the reflective element and the non-reflective  
element;  
recording data representative of light reflection and light absorption;  
storing first data representative of media thickness and transmissivity of a single sheet of a known print medium;  
storing second data representative of media thickness and transmissivity of at least two stacked sheets of a known print medium;  
recording third data representative of current medium thickness and transmissivity during transport of said current medium from a supply toward a printing zone; and  
comparing said third data to said first and second data.

9. (Currently Amended) A print media sensor device, comprising:  
a light emitter mounted for bracketing positioned in a linear transport  
region of a print media transport path, emitter receptor means for directing a  
light beam across the print media transport path, the light beam having  
predetermined intensity and wavelength for penetrating a sheet of print media in  
said print media transport path; and  
a reflective element and a non-reflective element mounted to an apparatus  
structure positioned in the print media transport path, the reflective element and  
the non-reflective element aligned with the emitter means light emitter; such that  
said light beam is received by the reflective element and the non-reflective  
element after passing through a the sheet of print media in said print media  
transport path, an associated light absorbing means and an associated light  
reflecting means for receiving the light beam, ; and  
a wherein the receptor means light detector positioned in the linear  
transport region of the print media transport path provides providing an output  
signal indicative of thickness and transmissivity of the sheet.

10. (Currently Amended) The device as set forth in claim 9  
wherein said output signal is further comprises a first level when no paper print media is interrupting the beam, a second output signal indicative of a single sheet of print media interrupting the beam, and at least one other signal level indicative of multiple sheets of print media interrupting the beam.

11. (Currently Amended) The device as set forth in claim 9  
wherein said output signal is further comprises a first signal when no paper print media is interrupting the beam, a second signal when the sheet of paper print media is interrupting the beam over a reflective surface, and a third signal when the sheet of paper print media is interrupting the beam over an absorptive surface.

12. (Currently Amended) The device as set forth in claim 11,  
further comprising:  
mounting means for the light emitter mounted to a transport, the transport powered for scanning said beam across a paper transport path of said paper print media wherein a reflective element and absorptive element are mounted transverse to said print media transport path such that the sheet of paper print media passes between said mounting means light emitter and said reflective element and absorptive element.

13. (Currently Amended) The device as set forth in claim 12,  
comprising wherein the light emitter further comprises:  
the emitter means is an LED optical emitter mounted for projecting a light beam through the paper print media wherein the light beam has a predetermined intensity and wavelength for penetrating and being reflected back through at least two sheets of print media.

14. (Cancelled) A computer memory comprising:

computer code for recording data representative of print medium thickness and transmissivity using an incident light source; and

computer code for comparing recorded data from said recording to predetermined data representative of known print medium thickness and transmissivity.